

**SYSTEM AND METHOD FOR CANCELING DARK PHOTOCURRENT IN A
COLOR SENSOR CIRCUIT**

ABSTRACT OF THE DISCLOSURE

A system and method for canceling dark photocurrent in a color sensor circuit is disclosed. A color sensor is described including a color sensor circuit, a dark color sensor circuit, and a differential amplifier circuit. The color sensor circuit receives photocurrent from a color component of a light input. The color sensor circuit outputs a first voltage indicating intensity of the color component. The dark color sensor circuit receives dark photocurrent and outputs a second voltage indicating an offset voltage. The differential amplifier circuit is coupled to the color sensor circuit and to the dark color sensor circuit. The differential amplifier circuit receives the first and second voltages and outputs a final output that cancels contributions of the offset voltage in the first voltage due to the dark photocurrent.